

US Department of Transportation
Intelligent Transportation Systems
Next Generation 9-1-1 Initiative

Trends in telecommunications mobility and convergence have put the 9-1-1 system at a crossroads. The growing market penetration of both cellular and Voice-over-Internet-Protocol (VoIP) telephony, and the increasingly mobile world they reflect, has underscored the limitations of the current 9-1-1 infrastructure. The nation's 9-1-1 system, based on decade's old technology cannot handle the text, data, images, and video that are increasingly common in personal communications and critical to future transportation safety and mobility advances.

The growing consensus within the 9-1-1 community on the need for a new, more capable system surrounding emergency call delivery and response (ultimately a *system of systems*). There is general agreement on the need to capitalize on advances in information and communications technologies, and develop systems that will enable:

- Quicker and more accurate information delivery to responders;
- Better and more useful forms of information (real-time text, images, video, and other data);
- More flexible, secure and robust Public Safety Answering Point (PSAP) operations; and
- Lower public capital and operating costs for emergency communication services.

The U.S. Department of Transportation (DOT) understands that access to emergency services provided by 9-1-1 in today's world of evolving technology will ultimately occur within a broader array of interconnected networks comprehensively supporting emergency services, from public access to those services, to the delivery and facilitation of the services themselves. Within that vision, DOT views Next Generation 9-1-1 (NG9-1-1) as expanding and improving the capabilities of PSAPs through new internetworking technologies.

The *Next Generation 9-1-1 Initiative* is a DOT research and development project that will help define the system architecture and develop a transition plan that considers responsibilities, costs, schedule and benefits for deploying IP-based emergency services across the nation. To accomplish this, DOT intends to work closely with public and private 9-1-1 stakeholders over the next two years these goals.

This project is leveraging work from DOT's earlier Wireless E9-1-1 Initiative and builds on IP-based 9-1-1 work already underway within a variety of related efforts. These include, but are not limited to the Federal Communications Commission (FCC) Network Reliability and Interoperability Council (NRIC), the National Emergency Number Association (NENA), the Internet Engineering Task Force (IETF), and the Alliance for Telecommunications Industry Solutions (ATIS) Emergency Services Interconnection Forum (ESIF). DOT expects that the products of these consensus efforts will form the foundation for NG9-1-1 Initiative research and development project.

The Initiative objective is to design a system that enables the transmission of voice, text, images and other data from all types of communication devices to PSAPs, and onto interconnected emergency responder networks.

– NG9-1-1...It's Not Just Telephones Anymore –